



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/803,032

03/18/2004

Brig Barnum Elliott

03-4056

5605

25537 7590 03/17/2009

VERIZON
PATENT MANAGEMENT GROUP
1320 North Court House Road
9th Floor
ARLINGTON, VA 22201-2909

EXAMINER

FIGUEROA, MARISOL

ART UNIT

PAPER NUMBER

2617

NOTIFICATION DATE

DELIVERY MODE

03/17/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@verizon.com

Office Action Summary	Application No. 10/803,032	Applicant(s) ELLIOTT, BRIG BARNUM	
	Examiner Marisol Figueroa	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-10,13-18,22-32 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-10,13-18,22-32 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2617

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/12/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 3, 5-10, 13-18, 22-32, and 34 have been considered but are moot in view of the new ground(s) of rejection. See rejection below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 3, 5, 9, 28, and 30-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. (US 5,751,789) in views of KNIGHT (US 2007/0060202) and JAVITT (US 6,285,857).

Regarding claim 1, Farris discloses a device (Smart Network Interface Device SNID or wireless-to-landline interface) for enabling network connectivity with a service provider, the device comprising:

Art Unit: 2617

a wireless transceiver (Fig. 2; Cellular Transceiver 51);

an antenna coupled to the wireless transceiver (Fig. 2; Antenna 25); and

a switch coupled to the wireless transceiver and to a wireline network (Fig. 2; col.2, lines 42-45 and 55-59; i.e., Switch 45), the switch exchanging data with the network service provider over the wireline network during normal operation and exchanging data with the network service provider via the wireless transceiver when the connectivity is lost on the wireline network (Fig. 1; col.3, lines 9-45; col. 3, line 65-col.4, lines 1-36; col.6, line 31-col. 7, lines 1-46; col.8, lines 54-62; the switch has two latched states, normal line-connected state (1) in which the switch is connected to the active wired telephone line 17 from the customer premises to the end office switch 11 (i.e., service provider) and changes to a second state (2) in where the active twisted pair (or wired telephone line) is connected to the landline-to-cellular interface, the switch connects the active twisted pair to the landline-to-cellular interface when a fault is detected in the end office switching system 11 (i.e., service provider) in order to connect to the end office switching center through the local serving mobile telephone switching office (MTSO) of a wireless communication network via the cellular transceiver).

But, Farris does not particularly disclose wherein the wireless transceiver is configured to relay data from another wireless transceiver that have lost connectivity on the wireline network with the service provider, said another wireless transceiver being connected to said wireless transceiver when said data is being relayed, said another wireless transceiver having been wireline-connected to the wireline network during normal operation.

However, Knight teaches a wireless transceiver configured to relay data from another wireless transceiver that have lost connectivity on the wireline network with the service provider,

Art Unit: 2617

said another wireless transceiver having been wireline-connected to the wireline network during normal operation (Fig. 1; paragraphs [0014], [0023], [0025], and [0027]; antenna unit 109 (i.e., wireless transceiver) is connected to the communication network (i.e., service provider) through cell site 101 that is "on the air" when it is connected to a switching center MTSO (i.e., service provider) over wired medium (i.e., wireline connection), the antenna 109 relays the connection with the MTSO to cell site 119 through antenna unit 116 (i.e., another wireless transceiver) when cell site 119 is "off the air" or "disconnected" because is not connected to the switching system MTSO (i.e., service provider), such as when a conventional cell site's TI cable (i.e., wireline connection) to the MTSO is cut). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Farris to have a wireless transceiver configured to relay data from another wireless transceiver that have lost connectivity on the wireline network with the service provider, said another wireless transceiver having been wireline-connected to the wireline network during normal operation, as suggested by Knight, since such a modification would provide the advantage for the subscribers to re-establish the communications with the service provider via alternative paths when losing their direct connection (i.e., wireline connection) with the service provider.

But, the combination of Farris and Knight does not particularly disclose wherein the wireless transceiver is configured to relay data from a plurality of other wireless transceivers, said other wireless transceivers being connected to said wireless transceiver through one or more of said other wireless transceivers when relaying data.

However, Javitt teaches wireless transceivers configured to relay data from a plurality of other wireless transceivers, said other wireless transceivers being connected to said wireless

Art Unit: 2617

transceiver through one or more of said other wireless transceivers when relaying data (Fig. 1; col. 2, line 60-col. 4, lines 1-4; Javitt teaches a network of geographically scattered users served by access points 20a and 20b (i.e., service providers), each of the users is associated with a transceiver relay point and form a link with the access points via one or more of the relay points, for example, relay point 30c can communicate with the access point 20a via the path 20a-30a-30b-30c). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the combination to have the wireless transceivers configured to relay data from a plurality of other wireless transceivers, said other wireless transceivers being connected to said wireless transceiver through one or more of said other wireless transceivers when relaying data, as suggested by Javitt, since such a modification would allow the extension of the service to geographically separate subscribers through the relay via a plurality of wireless transceivers.

Regarding claim 3, the combination of Farris, Knight, and Javitt disclose the device of claim 1, in addition the combination discloses wherein the wireless transceiver relays data from the other wireless transceivers that have lost connectivity by forwarding data units from the other wireless transceivers through the switch and to the wireline network (Knight-Fig. 1; paragraphs [0014], [0023], [0025], and [0027]; note that the combination of Farris, Knight, and Javitt will produce this).

Regarding claim 5, the combination of Farris, Knight, and Javitt disclose the device of claim 1, in addition Farris discloses wherein the device is physically located at a location of a subscriber of the network service provider (col.4, lines 18-21).

Art Unit: 2617

Regarding claim 9, the combination of Farris, Knight, and Javitt disclose the device of claim 1, in addition Farris discloses wherein the switch monitors a failed connection state of the wireline network for renewed connectivity of the wireline network and resumes communication over the wireline network when the wireline connection is renewed (col.10, lines 41-56).

Regarding claim 28, Farris discloses a network comprising:

wireline connections to a plurality of subscribers (note that it is conventional and well known in the art to provide wireline connections/services to a plurality of subscribers);

network interface units (NIUs) located at the plurality of subscribers (col.2, lines 40-45; col.4, lines 18-21; note that it is inherent to recognize when there is a plurality of wireline subscribers there will be a plurality of network interface units (i.e. SNID), one located at each subscriber premises), the NIUs each including:

a wireless transceiver (col.4, lines 26-28; Fig. 2; Cellular Transceiver 51); and

a switch coupled to the wireless transceiver and to one of the wireline connections (Fig. 2; col.2, lines 42-45 and 55-59; Switch 45), the switch providing data from one of the wireline connections to a corresponding subscriber of the network during normal operation of the one of the wireline connections and the switch providing data from the wireless transceiver to the corresponding subscriber of the network when connectivity on the one of the wireline connections fail (Fig. 1; col.3, lines 9-45; col. 3, line 65-col.4, lines 1-36; col.6, line 31-col. 7, lines 1-46; col.8, lines 54-62; the switch has two latched states, normal line-connected state (1) in which the switch is connected to the active wired telephone line 17 from the customer premises to the end office switch 11 (i.e., service provider) and changes to a second state (2) in where the active twisted pair (or wired telephone line) is connected to the landline-to-cellular interface, the

Art Unit: 2617

switch connects the active twisted pair to the landline-to-cellular interface when a fault is detected in the end office switching system 11 (i.e., service provider) in order to connect to the end office switching center through the local serving mobile telephone switching office (MTSO) of a wireless communication network via the cellular transceiver).

But, Farris does not particularly disclose wherein the wireless transceiver is configured to relay data from another wireless transceiver in another NIU to which its respective one of said wireline connection have failed, the wireless transceiver being wireline-connected to the wireline network.

However, Knight teaches a wireless transceiver configured to relay data from another wireless transceiver that have lost connectivity on the wireline network, said wireless transceiver being wireline-connected to the wireline network (Fig. 1; paragraphs [0014], [0023], [0025], and [0027]; antenna unit 109 (i.e., wireless transceiver) is connected to the communication network (i.e., service provider) through cell site 101 that is "on the air" when it is connected to a switching center MTSO (i.e., service provider) over wired medium (i.e., wireline connection), the antenna 109 relays the connection with the MTSO to cell site 119 through antenna unit 116 (i.e., another wireless transceiver) when cell site 119 when is "off the air" or "disconnected" because is not connected to the switching system MTSO (i.e., service provider), such as when a conventional cell site's TI cable (i.e., wireline connection) to the MTSO is cut). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Farris to have a wireless transceiver configured to relay data from another wireless transceiver that have lost connectivity on the wireline network, said wireless transceiver being wireline-connected to the wireline network, as suggested by Knight, since such a modification

Art Unit: 2617

would provide the advantage for the subscribers to re-establish the communications with the service provider via alternative paths when loosing their direct connection (i.e., wireline connection) with the service provider.

But, the combination of Farris and Knight does not particularly disclose relaying data from yet another wireless transceiver.

However, Javitt teaches wireless transceivers configured to relay data from a plurality of another wireless transceivers (Fig. 1; col. 2, line 60-col. 4, lines 1-4; Javitt teaches a network of geographically scattered users served by access points 20a and 20b (i.e., service providers), each of the users is associated with a transceiver relay point and form a link with the access points via one or more of the relay points, for example, relay point 30c can communicate with the access point 20a via the path 20a-30a-30b-30c). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the combination to have the wireless transceivers configured to relay data from a plurality of another wireless transceivers, as suggested by Javitt, since such a modification would allow the extension of the service to geographically separate subscribers through the relay via a plurality of wireless transceivers.

Regarding claim 30, the combination of Farris, Knight, and Javitt disclose the network of claim 28, in addition Farris discloses wherein the NIUs each additionally include an antenna coupled to the wireless transceiver (Fig. 2; Antenna 25).

Regarding claim 31, the combination of Farris, Knight, and Javitt disclose the network of claim 28, in addition Knight discloses wherein the wireless transceiver is configured to relay data from other wireless transceivers that have lost connectivity with the wireline connections (Fig. 1; paragraphs [0014], [0023], [0025], and [0027]; note that the combination of Farris and

Art Unit: 2617

Knight will produce this, additionally see remarks about claim 28 regarding the combination of Farris and Knight above).

Regarding claim 32, the combination of Farris, Knight, and Javitt disclose the network of claim 28, in addition Knight discloses wherein the wireless transceiver relays data from the other wireless transceivers that have lost connectivity by forwarding data units from the other wireless transceivers through the switch and to the wireline network (Fig. 1; paragraphs [0014], [0023], [0025], and [0027]; note that the combination of Farris and Knight will produce this, see remarks about claim 28 above).

5. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. in views of KNIGHT, JAVITT, and well known prior art (MPEP 2144.05).

Regarding claim 6, the combination of Farris, Knight, and Javitt disclose the device of claim 1, in addition Farris disclose that a variety of wireless transceivers could be used (col.7, lines 13-23), but fails to specifically disclose wherein the wireless transceiver operates in accordance with IEEE 802.11 standards. However, the Examiner takes official notice of the fact that is notoriously well known in the art that the IEEE 802.11 standard is a wireless network technology. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to modify Farris to include a wireless transceiver in accordance with IEEE 802.11 standards, since it is notoriously and well known in the art that that the IEEE 802.11 standard is one of a variety of wireless transceivers used in wireless networks and Farris' invention will perform equally well as with using a cellular transceiver, since Farris indicates that his invention is not restricted to using only a cellular transceiver.

Art Unit: 2617

6. **Claim 7** rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. in views of KNIGHT, JAVITT, and EHRETH (US 6,246,750 B1).

Regarding claim 7, the combination of Farris, Knight, and Javitt disclose the device of claim 1, but the combination does not particularly disclose wherein the wireline network includes a fiber network. However, Ehreth teaches that telecommunication systems using fiber optic cable to transmit communication signals are becoming increasingly prevalent due to the enormous advantages that fiber-optic technology provides (col.1, lines 25-31). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the combination in order for the wireline network to include a fiber network, as suggested by Ehreth, because telecommunication systems using fiber optic cables have enormous advantages over copper-wire based systems such as larger bandwidth and improved signal quality.

7. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. in views of KNIGHT, JAVITT, and McKENNA et al. (US 6,829,486 B2).

Regarding claim 8, the combination of Farris, Knight, and Javit disclose the device of claim 1, but the combination does not particularly disclose wherein the wireline network includes coaxial cables. However, McKenna teaches that wirelined-based communications networks such as traditional telephone systems, Local Area Networks, and the like, can use a variety of physical media to interconnect wired subscribers devices to the wirelined-based communication network and these include: twisted pair, Ethernet, coaxial cable, fiber optic cable, DSL on twisted pair, 4-wire, and the like (col.9, lines 31-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to modify the combination in order for the wireline network to include coaxial cables, as taught by McKenna, because it is conventional and

Art Unit: 2617

well known in the art that coaxial cables is one of the variety of physical media used to interconnect subscribers in a wirelined-based communication network.

8. **Claims 10, 15, 17, 18, and 23-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over CARDINA et al. (US 2004/0214569 A1) in view of KNIGHT.

Regarding claim 10, Cardina discloses a method performed by a network subscriber comprising:

establishing wireline-connectivity to a network service provider over a wireline connection as a normal connectivity of said network subscriber (Fig. 1; paragraphs [0038], lines 1-9; paragraph [0058]; note that when there is no interruptions in the subscriber's landline/wireline there is a direct landline connection 101 with the network service provider (i.e., public switched network 108));

monitoring the wireline connection for failure (paragraph [0038] lines 1-9, [0058] and [0070]; the backup device 102 monitors and detects service interruption conditions in the customer's landline connection 101 to the landline network); and

when the wireline connection fails, automatically establishing a substitute wireline connection to the network service provider over a wireless connection (Fig. 1; paragraphs [0008], [0012], and [0070]-[0073]; the backup device upon detecting a failure condition in the landline automatically provides backup service to the landline telephone equipment through a wireless telephone (i.e., wireless connection)).

But, Cardina does not particularly disclose wherein the connection to the network service provider is established over a wireless connection relayed from a network subscriber who has a normal wireline-connectivity to the network service provider.

However, Knight teaches establishing a connection with a network service provider over a wireless connection relayed from a network subscriber who has wireline-connectivity to the network service provider when a wireline connection fails (Fig. 1; paragraphs [0014], [0023], [0025], and [0027]; when cell site 119 (i.e., subscriber) is said to be “off the air” or “disconnected” because cell site’s cable T1 (i.e., wireline connectivity) to the MTSO (i.e., service provider) is cut, the cell site 119 receives or reestablish the connection with the MTSO relayed from cell site 101 (through antenna units 116, 109) which is “on the air” because is connected over a wired medium 100 (i.e., normal wireline connectivity) with the MTSO (i.e., service provider)). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Farris to include the features of establishing a connection with a network service provider over a wireless connection relayed from a network subscriber who has wireline-connectivity to the network service provider when a wireline connection fails, as suggested by Knight, since such a modification would provide the advantage for the subscribers to re-establish the communications with the service provider via alternative paths when loosing their direct connection (i.e., primary wireline connection) with the service provider.

But, the combination of Cardina and Knight does not particularly disclose relaying the service via a wireless connection through more than one other network subscriber.

However, Javitt teaches network subscribers comprising wireless transceivers configured to relay a service via a wireless connection through more than one other network subscriber (Fig. 1; col. 2, line 60-col. 4, lines 1-4; Javitt teaches a network of geographically scattered users served by access points 20a and 20b (i.e., service providers), each of the users is associated with

Art Unit: 2617

a transceiver relay point and form a link with the access points via one or more of the relay points, for example, relay point 30c can communicate with the access point 20a via the path 20a-30a-30b-30c). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the combination to include the features of relaying the service via a wireless connection through more than one other network subscriber, as suggested by Javitt, since such a modification would allow the extension of the service to geographically separate subscribers through the relay via a plurality of wireless transceivers.

Regarding claim 15, the combination of Cardina, Knight, and Javitt disclose the method of claim 14, in addition Cardina discloses wherein automatically establishing a connection to the network service provider further includes authorizing the subscriber to use the network (paragraph [0012]; the backup device automatically registers with the MTSO, note that registration involves authorization).

Regarding claim 16, the combination of Cardina, Knight, and Javitt disclose the method of claim 10, in addition Knight discloses wherein the relaying one or more other network subscribers forward data wirelessly from the network over a second wireless connection to the network service provider (see Fig. 1).

Regarding claim 17, the combination of Cardina, Knight, and Javitt disclose the method of claim 10, in addition Cardina discloses further comprising: monitoring a failed connection state of the wireline connection for renewed connectivity of the wireline connection; and disconnecting from the wireless connection when the wireless connection is renewed (paragraph [0015]).

Art Unit: 2617

Regarding claim 18, Cardina discloses a method for providing fallback network connectivity to a network service provider for one of a plurality of network nodes, said method comprising:

providing wireline-connectivity as primary network connectivity to said service provider for each of said network nodes (Fig.1; paragraphs [0002]; [0057]-[0058] lines 1-4; the customer premises equipments (i.e., network nodes) have landline connections 101 (i.e., primary wireline connection) with the public switched telephone network 108 (i.e., service provider); although only one customer premises equipment is shown, it is well known in the art that a plurality of homes have landline connections to the public switched telephone network);

and providing backup network connectivity to said one node via a wireless network (Fig. 1; paragraphs [0008], [0012], and [0070]-[0073]; customer premises equipment have backup device 102 that automatically provides backup service to the landline telephone equipment through a wireless telephone/network)).

But, Cardina does not particularly disclose wherein said back up network connectivity is implemented by wirelessly relaying data directly from said one node to another node in the plurality of networks nodes which had an active wireline connection to the network service provider.

However, Knight teaches providing back up network connectivity to said one node via a wireless network, implemented by wirelessly relaying data directly from said one node to another node in the plurality of networks nodes which had an active wireline connection to the network service provider (Fig. 1; paragraphs [0014], [0023], [0025], and [0027]; when cell site 119 (i.e., subscriber) is said to be “off the air” or “disconnected” because cell site’s cable T1

Art Unit: 2617

(i.e., wireline connectivity) to the MTSO (i.e., service provider) is cut, the cell site 119 receives or reestablish the connection with the MTSO relayed from cell site 101 (through antenna units 116, 109) which is “on the air” because is connected over a wired medium 100 (i.e., normal wireline connectivity) with the MTSO (i.e., service provider)). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Farris to include the features of providing back up network connectivity to said one node via a wireless network, implemented by wirelessly relaying data directly from said one node to another node in the plurality of networks nodes which had an active wireline connection to the network service provider, as suggested by Knight, since such a modification would provide the advantage for the subscribers to re-establish the communications with the service provider via alternative paths when loosing their direct connection (i.e., primary wireline connection) with the service provider.

But, the combination of Cardina and Knight does not particularly disclose wherein the another node is connected to yet another node.

However, Javitt teaches nodes (i.e., relay points) configured to relay data through a plurality of another nodes (Fig. 1; col. 2, line 60-col. 4, lines 1-4; Javitt teaches a network of geographically scattered users served by access points 20a and 20b (i.e., service providers), each of the users is associated with a transceiver relay point and form a link with the access points via one or more of the relay points, for example, relay point 30c can communicate with the access point 20a via the path 20a-30a-30b-30c). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the combination to have nodes (i.e., relay points) configured to relay data through a plurality of another nodes, as

Art Unit: 2617

suggested by Javitt, since such a modification would allow the extension of the service to geographically separate subscribers through the relay via a plurality of wireless transceivers.

Regarding claim 23, the combination of Cardina, Knight, and Javitt disclose the method of claim 18, in addition Cardina discloses wherein providing the backup network connection includes authorizing the subscriber of the network with the network service provider (paragraph [0012]; the backup device automatically registers with the MTSO, note that registration involves authorization).

Regarding claim 24, the combination of Cardina, Knight, and Javitt disclose the method of claim 18, in addition Cardina discloses further comprising: providing the backup network connectivity in response to a failed connection state of the wireline connection (paragraphs [0008] and [0011]).

Regarding claim 25, the combination of Cardina, Knight, and Javitt disclose the method of claim 24, in addition Cardina discloses further comprising: monitoring failed connection state of the wireline connection for renewed connectivity of the wireline connection; and disconnecting from the backup network connectivity when the wireline connection is renewed (paragraph [0015]).

Regarding claim 26, the combination of Cardina, Knight, and Javitt disclose the method of claim 18, in addition Cardina disclose wherein the network service provider provides Internet connectivity or telephony services (Fig. 1; the network service provider is a Public Switched Telephone Network (PSTN) that provide telephony services).

9. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over CARDINA et al. in views of KNIGHT, JAVITT, and SAWADA (US 2005/0148315 A1).

Art Unit: 2617

Regarding claim 14, the combination of Cardina, Knight, and Javitt disclose the method of claim 10, but the combination does not particularly disclose wherein automatically establishing a connection to the network service provider includes broadcasting a message requesting a relay to the network service provider by the one or more other network subscribers.

However, Sawada teaches broadcasting a message requesting a relay to the network service provider by the one or more other network subscribers (paragraphs [0066]-[0067]). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the combination to include the features of broadcasting a message requesting a relay to the network service provider by the one or more other network subscribers, as suggested by Sawada, since such a modification would provide the advantage of relaying communications or the connection to the subscriber that issue the relay request (paragraph [0067]).

10. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over CARDINA et al. in views of KNIGHT, JAVITT, and McKENNA et al.

Regarding claim 27, the combination of Cardina, Knight, and Javitt disclose the method of claim 18, but the combination does not particularly disclose wherein the wireline network includes a fiber connection or a coaxial connection leading to a subscriber of the network service provider.

However, McKenna teaches that wirelined-based communications networks such as traditional telephone systems, Local Area Networks, and the like, can use a variety of physical media to interconnect wired subscribers devices to the wirelined-based communication network and these include: twisted pair, Ethernet, coaxial cable, fiber optic cable, DSL on twisted pair, 4-

Art Unit: 2617

wire, and the like (col.9, lines 31-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to modify the combination in order for the wireline network to include coaxial cables, as taught by McKenna, because it is a standard material used to interconnect subscribers in a wirelined-based communication network.

11. **Claim 29** is rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. in views of KNIGHT, JAVITT, and PATRON et al. (US 2005/0063333 A1).

Regarding claim 29, the combination of Farris, Knight, and Javitt disclose the network of claim 28, but the combination does not particularly disclose wherein the NIUs form a wireless ad-hoc network. However, Patron teaches that Ad-hoc networks usually consist of several computing devices each equipped with a wireless transceivers (P.0001). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to recognize that an ad-hoc network may form between the plurality of NIUs, as taught by Patron, because an Ad-hoc network usually consists of devices comprising wireless transceivers and each NIU comprises a wireless transceiver.

12. **Claims 13 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over CARDINA et al. in views of KNIGHT, JAVITT, and further in view of well known prior art (MPEP 2144.05).

Regarding claims 13 and 22, the combination of Cardina, Knight, and Javitt disclose the method of claims 10 and 18, but the combination does not particularly disclose wherein the wireless network is formed in accordance with IEEE 802.11 wireless connectivity standards. The Examiner takes official notice of the fact that is notoriously well known in the art that the IEEE 802.11 standard is a wireless network technology. Therefore, it would have been obvious to one

Art Unit: 2617

having ordinary skill in the art at the time of the invention to form a wireless network in accordance with IEEE 802.11 standards in Cardina's invention since is one of a variety of wireless networks available to create wireless local area networks and more cost effective compared to other wireless networks.

13. **Claim 34** is rejected under 35 U.S.C. 103(a) as being unpatentable over KNIGHT in view of JAVITT.

Regarding claim 34, Knight discloses a method for maintaining wireline communication comprising:

providing first wireline communication and first wireless communication between a first network subscriber and a network service provider (Fig. 1, i.e., cell site 119 connected to antenna unit 116; paragraphs [0023], [0027], and [0028]; cell site 119 connected to antenna unit 116 (i.e., first network subscriber) when "on the air" has a connection with the MTSO (i.e., network service provider) over a wired medium 100, but when "off the air" the cell site 119 reestablish communications with the MTSO via a wireless connection through antenna unit 116);

providing second wireline communication and second wireless communication between a second network subscriber and said network service provider (Fig. 1, cell site 101 connected to antenna unit 109; cell site 101 connected to antenna unit 109 (i.e., second network subscriber) has a connection with the MTSO (i.e., network service provider) over a wired medium 100); and

providing, when said first wireline communication fails, substitute wireline communication for said first network subscriber by way of said second wireline communication by wirelessly relaying data between two nodes, one of

Art Unit: 2617

said nodes located in or on premises of said first network subscriber and the other of said nodes located in or on premises of said second network subscriber, said other of said nodes relaying said data with said network service provider over a wireline otherwise normally carrying only said second wireline communication (Fig. 1; paragraphs [0023], [0027], and [0028]; cell site 119 connected to antenna unit 116 (i.e., first network subscriber) when “on the air” has a connection with the MTSO (i.e., network service provider) over a wired medium 100, but when “off the air” the cell site 119 reestablish communications with the MTSO relayed from cell site 101 and antenna unit 109 (i.e., substitute wireline connection with the MTSO)).

But, Knight does not particularly disclose wirelessly relaying data indirectly between two nodes through a third node associated with a third network subscriber.

However, Javitt discloses wirelessly relaying data indirectly between two nodes through a third node associated with a third network subscriber (Fig. 1; col. 2, line 60-col. 4, lines 1-4; Javitt teaches a network of geographically scattered users served by access points 20a and 20b (i.e., service providers), each of the users is associated with a transceiver relay point and form a link with the access points via one or more of the relay points, for example, relay point 30c can communicate with the access point 20a via the path 20a-30a-30b-30c, consequently relay point 30c communicates with access point 20a indirectly via the relay points 30a and 30b for example). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the combination to include the features of wirelessly relaying data indirectly between two nodes through a third node associated with a third network subscriber, as suggested by Javitt, since such a modification would allow the extension of the service to geographically separate subscribers through the relay via a plurality of nodes.

Art Unit: 2617

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday Thru Friday 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent P. Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VINCENT P. HARPER/
Supervisory Patent Examiner, Art Unit 2617

/Marisol Figueroa/
Examiner, Art Unit 2617